

(Model.)

C. THOMAS.
SCREW DRIVER.

No. 258,329.

Patented May 23, 1882.

Fig. 1.

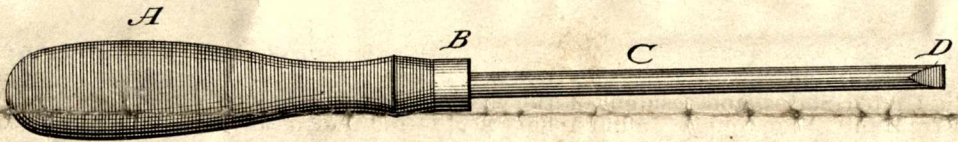


Fig. 2.

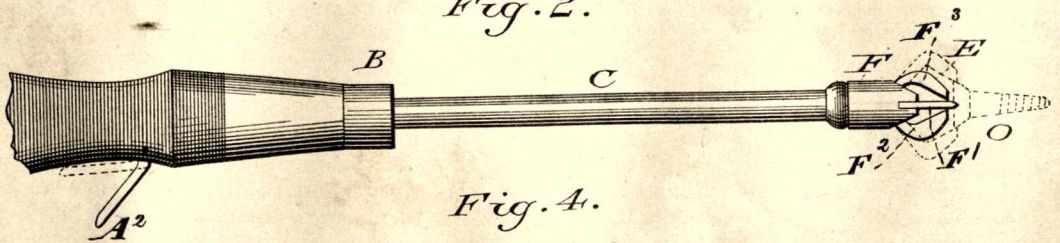


Fig. 4.

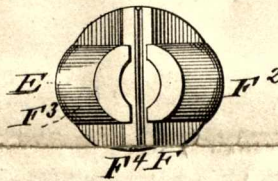
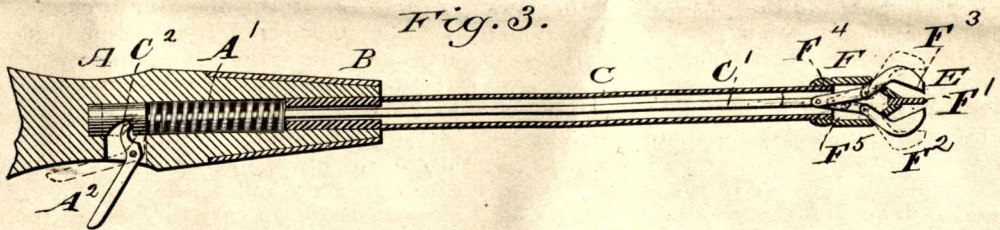


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

CAL THOMAS, OF TERRE HAUTE, INDIANA.

SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 258,329, dated May 23, 1882.

Application filed February 16, 1882. (Model.)

To all whom it may concern:

Be it known that I, CAL THOMAS, a citizen of the State of Indiana, of Terre Haute, Vigo county, Indiana, have invented a new and useful Screw-Driver and Screw-Adjuster, of which the following is a specification.

My invention relates to improvements in screw-drivers in which clamping-jaws are used for holding the screw in contact with the driver when entering it into the material into which it is to be driven; and the objects of my improvements are to provide certain novel devices and combinations thereof, which, when properly arranged, shall constitute a screw-driver, which, when a screw is properly placed in it, will hold it in position for being entered into the substance into which it is to be driven, and at the same time cause the dogs which hold the screw, as above described, to automatically recede sufficiently far to allow the screw to be driven to such a depth as to allow the outer surface of its head to be flush with the surface of the substance. I attain these objects by the devices and combinations illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of an ordinary screw-driver without having applied to it any means of holding the screw in contact therewith. Fig. 2 is a plan view of my improved device, showing the clamping-jaws, the tool which enters the slot formed in the head of the screw, a screw in dotted lines, and the position of the jaws while clamping the screw. Fig. 3 is a sectional elevation, showing a portion of the recessed handle, the hollow shank, the enlargement upon its outer end, the rod, and mechanism for operating the dogs, and the jaws for clamping the screws; and Fig. 4 is an end view, showing the enlargement on the end of the shank, the tool which enters the slot in the head of the screw, and the clamping-jaws.

Similar letters refer to similar parts throughout the several views.

In constructing this type of screw-driver I provide a handle, A, of any suitable material and form, which, when made of wood, is provided upon its inner end with a metal ferrule, B, as shown in the drawings. In the inner end of the handle there is formed an annular recess, in which there is placed a spiral spring,

A', which is designed to operate the clamping-jaws, as will hereinafter be described. The sides of the handle A may be flattened if preferred, but in any event there is to be joined to it an arm, A², the inner end of which enters the handle far enough to allow it to come in contact with an enlargement formed on the rod which operates the clamping-jaws, as shown in Fig. 3.

In making provision for holding the screw in proper position for being entered into the substance that is to receive it, I provide a hollow stock or rod, C, to the outer end of which there is secured a ferrule, the outer end of which is constructed as shown, and is furnished with a slot or groove, into which there is placed a tool, F', which, when the screw is being turned, enters the slot in its head and causes it to turn as the tool is turned. The enlarged portion F, being hollow, affords room within it for the arrangement of two clamping-jaws, F² and F³, which work in slots formed in the outer end of the enlargement F, their inner ends being pivoted to short connecting-links F⁴ F⁵, or said links may be dispensed with and the inner ends of the jaws be connected to the end of a sliding rod, C', which passes through the shank C and enters the handle A, passes through the spiral spring A', and terminates in an enlargement, C², which has in it a notch or recess, which forms a shoulder against which the arm A² presses when its outer end is by the pressure of the hand of the operator brought into the position shown in dotted lines in Figs. 2 and 3, at which times the clamping-jaws F² and F³ will be in the position shown in dotted lines in Fig. 3, at which times they will not act upon the screw at all, but upon removing the pressure of the hand from the arm A² the spring will cause the rod C' and the jaws F² F³ to be moved so as to cause the latter to clamp the head of the screw, as shown in Fig. 2, and thus hold it in position to be driven home.

As the arm A² will at times protrude some distance from the handle, and thus be the source of annoyance, I prefer in some cases to operate the rod C' and the clamping-jaws by a cross-head, or a rod placed in a slot formed in the handle A, its ends projecting just far enough to allow the operator to place a thumb and finger thereon for the purpose of moving the parts.

This proposed method of operating the parts does not in any sense affect the principle of operation. It therefore amounts only to a modification of one of its parts. It is apparent that 5 this tool or implement may be used in a bit-stock, or may be turned by any other suitable device as well as by hand.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In an implement for driving screws, the combination of the tubular shank C, having upon its outer end a chambered enlargement, to the

interior of which the clamping-jaws are pivoted, a sliding rod, C', which passes through the shank and enters the handle A, clamping-jaws F² F³, a spring, A', for operating said jaws, located in the handle, and a lever, A², or equivalent device, for operating the clamping-jaws, the parts being constructed and arranged substantially as and for the purpose set forth.

CAL THOMAS.

Witnesses:

WILLIAM MACK,
J. R. THOMAS.